

**Testimony of
Bert Little, Ph.D.
Associate Vice President for Academic Research
Executive Director, Center for Agribusiness Excellence
Tarleton State University
Before the Subcommittee on General Farm Commodities and Risk Management
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Chairman Moran, Ranking Member Etheridge, and Members of the Subcommittee, thank you for the opportunity to appear this morning before the subcommittee to discuss efforts to eliminate fraud, waste and abuse in the Federal Crop Insurance program and, in particular, the data warehousing and data mining efforts currently undertaken by the Center for Agribusiness Excellence (CAE) for the Risk Management Agency (RMA).

I. WHO IS TESTIFYING

I am Bert Little, Associate Vice President for Academic Research and Professor of Computer Science and Mathematics at Tarleton State University, which has been a member of the Texas A&M University System since 1917. In this role, I also direct the CAE, which was founded at Tarleton specifically to address a section of the Agriculture Risk Protection Act of 2000 (ARPA 2000) that directs the Secretary of Agriculture to use data mining and data warehousing to improve integrity and compliance in Federal Crop Insurance. As the subcommittee knows, program abuse was a central concern of both Congress and farm producers during the development of ARPA 2000. Testimony made clear that crop insurance abuse was hurting farmers everywhere by weakening program credibility and creating pressure for higher farmer-paid insurance premiums. The resulting statute contained several important planks to address this problem by tightening oversight and toughening penalties. Key among these was Section 515(f), which directs the Secretary to detect abuses by tracking agents, producers, and other program participants with disparate performance records and to provide Congress with an Annual Report on Program Compliance and Integrity Efforts. To accomplish these ends, Section 515(j)(2) on Information Management directs that

The Secretary shall use information technology known as data mining and data warehousing and other available information technologies to administer and enforce this title.

In open competition in July 2002, CAE won a five-year USDA contract to perform these tasks laid out in Sections 515(f) and 515(j)(2) of ARPA 2000. At the time, CAE had been working with RMA under a Cooperative Agreement from December 14, 2000, to research a report on disparate performance in the program. As a result, CAE now has built a record of more than five years of experience and accomplishment in this field and, working with RMA, has demonstrated how data mining techniques can dramatically improve program operation in real world practice. The results of CAE's work under ARPA 2000 were reported in RMA's Annual Reports on Program Compliance and Integrity Efforts, as required under Section 515(i) and cited below.

II. HOW MUCH SAVINGS FOR USDA RMA

I say with some pride that the record of accomplishment by RMA and CAE under the data mining program has been formidable. In its first two compliance and integrity reports, RMA reported that CAE saved the Federal Crop Insurance program respectively \$72 million and \$110 million during crop years 2001 and 2002 through indemnities not paid because of increased scrutiny of anomalous policies. RMA reported in its most recent, dated January 2006, report that CAE's data mining effort saved an additional \$81 million for 2003, which is the most recent year for which RMA has published data.¹

III. HOW SAVINGS WERE ACHIEVED: DATA MINING AND WAREHOUSING

These savings were achieved through a number of coordinated initiatives, and I compliment RMA and its staff in its effective use of this new tool at its command compliance arsenal. At this point, CAE has developed a data warehouse that contains all RMA policy information from 1990 to the present. In addition, CAE has integrated data on weather, soils, and other agronomically relevant factors into its warehouse. The total data in the warehouse is in excess of two terabytes (terabyte = 1 trillion words (bites) of information) and are standardized to the same scaling and format to allow multi-year analyses, which were previously not possible. The data warehouse is updated every two weeks by information provided from RMA. The data warehouse is secured behind RMA's firewall, subject to the same privacy and security protections as data maintained by USDA itself.

IV. ONE EXAMPLE: THE SPOTCHECK LIST

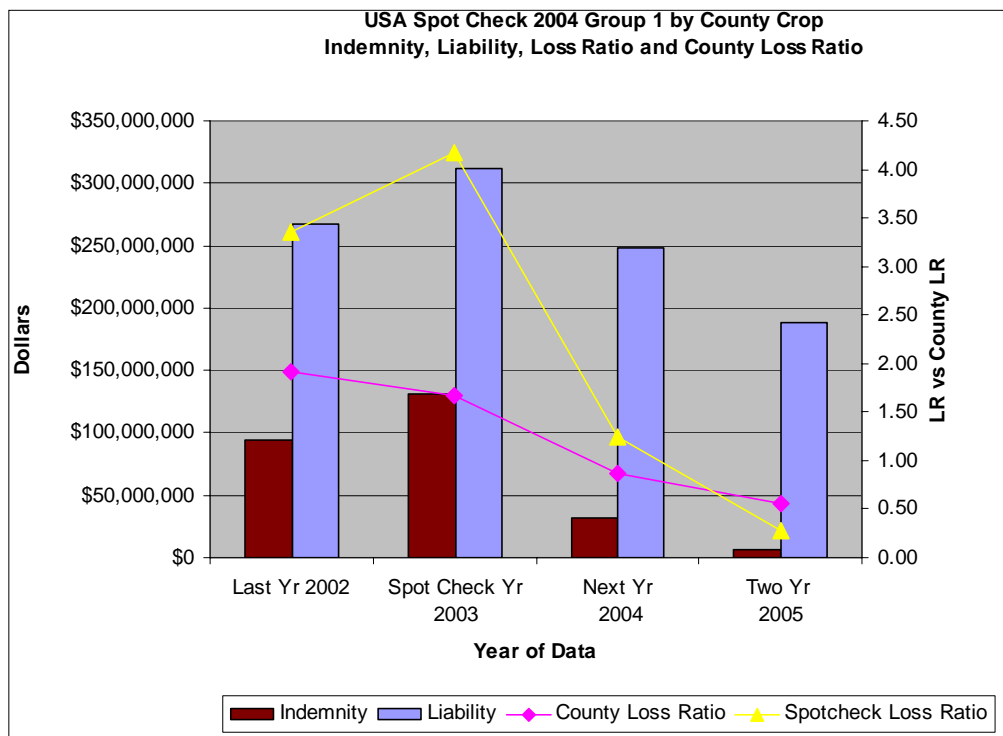
Through various programs and algorithms, we have worked with RMA to identify multi-year patterns that signal suspicious or anomalous crop insurance claims. One specific effort, called the Spotcheck List, follows a simple process to translate this data into concrete program savings:

- (1) Often using as a starting point anecdotes from the field (investigators, producers, agents, adjusters), we use our data mining system to identify schemes that appear to be in use to obtain possibly improper crop insurance indemnities;
- (2) The potential scheme is analyzed to determine whether it exists in the national data, where, and to what extent. We assign teams of RMA and CAE analysts to review the data and determine whether the scheme is reasonable or practical from an agricultural or field perspective;
- (3) We place these schemes and the specific producers identified as having participated in them on a Spotcheck List. The list is reviewed by USDA RMA Compliance staff which may add additional persons of interest to it;

¹ *Risk Management Agency Program Compliance and Integrity Annual Report to Congress, June 2000 – December 2001*, April 2002, v; *Risk Management Agency: Preventing Fraud. Protecting Farms. Program Compliance and Integrity Annual Report to Congress, January 2002 – December 2002*, November 2004, 11; *Risk Management Agency Program Compliance and Integrity Annual Report to Congress, January – December 2003*, January 2006, 13-14.

- (4) The Spotcheck list is then provided to USDA's Farm Service Agency (FSA), whose local county offices are asked to conduct growing season inspections (GSIs) on the identified fields;
- (5) At an early point in the growing season, FSA sends letters, notifying each producer on the Spotcheck List that a GSI will be performed on his or her crop and an additional pre-harvest visit may be made.

Not surprisingly, producers who are on the Spotcheck List react to the information by backing off any contemplated abusive activities, resulting in drastic, visible, measurable improvements in program performance. Growers change their behavior as a result of simply knowing that they are being scrutinized. In most cases, the effect lasts for two years (Chart Below); a small proportion, one-fifth, change their behavior for only one year (See Appendix I). Altogether, over five years (2001 through 2005), this one initiative, the Spotcheck List, produced indications of reduction in unneeded indemnities of approximately \$450 million (Appendix II).



The chart above tracks the performance of those policies on the Spotcheck List (deployed in 2004 but based on 2003 data) for which the improvement lasted at least two years, about two-thirds of the total. Note the dramatic decreases in indemnities paid to those producers in 2004 as well as similar decreases in 2005. For this group alone, the cumulative savings to RMA in reduced indemnities approximately \$99 million in 2004 and an additional \$26 million in 2005.

IV. OTHER COST SAVINGS ACTIVITIES BY CAE

CAE produces more than the Spotcheck List for RMA. During 2005, we produced 122 additional research products at the request of RMA aimed at identifying program abuse, each laying the groundwork for additional cost savings. In addition, we have used our data mining

tools to assist the USDA Office of Inspector General (OIG) in its investigations and audits of USDA programs, the Government Accountability Office (GAO), plus the work of Federal prosecutors and the Federal Bureau of Investigation (FBI). CAE personnel also have served as expert witnesses for Federal prosecutors when requested.

V. FUTURE OF CAE

We believe that data mining as mandated under ARPA 2000 has been a dramatic success for Congress and USDA. For an investment of \$22.5 million, it has conservatively produced program savings of over \$450 million since December 2000 with the Spotcheck List alone. The public interest argues strongly that it should and must be continued.

At this point, however, despite wide support for data mining and a strong record of accomplishment, the future of the program remains much in doubt. ARPA 2000 provided mandatory funding for data mining through the Federal Crop Insurance fund. However, this provision expired following Fiscal Year 2005. To bridge the gap, Congress provided discretionary funds in the Fiscal Year 2006 agricultural appropriations bill, though conferees noted that this represented “one-time funding.”² Last month, the House included funding in the Fiscal Year 2007 appropriations bill to continue the project.

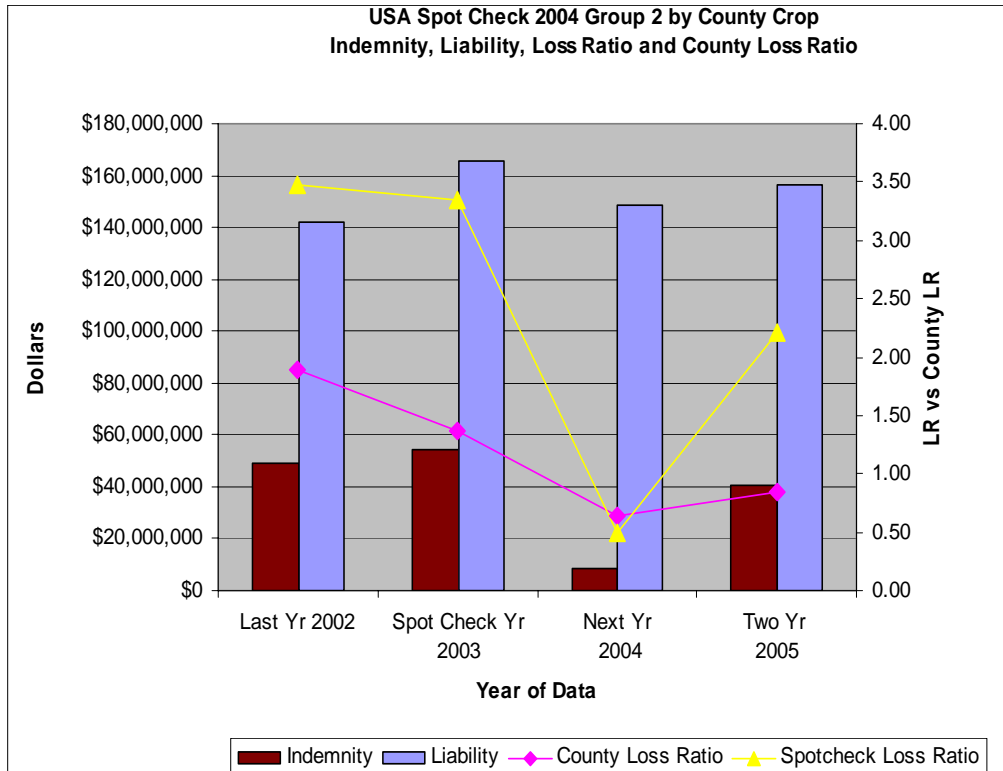
Adoption of the Fiscal Year 2007 appropriation provision will allow data mining to continue for another year. For the longer term, Congress may wish to consider continuing this program under the same funding structure originally adopted under ARPA 2000, that is, by providing a multi-year funding authority under the Federal Crop Insurance fund. This approach would provide the stability needed and predictability needed to make the program work over the long haul, allowing the kind of multiyear planning and analysis that made the approach so successful under the original statute. We stand ready to work with you to help address this issue.

VI. SUMMARY

Thank you again for giving us this opportunity to summarize CAE’s record of providing cost savings to the Federal Crop Insurance program under the ARPA 2000 data mining program. Congress and USDA deserve a great deal of credit for taking the bull by the horns and implementing this program in an effective way to the benefit of farmers and taxpayers. We have been honored to be part of the process.

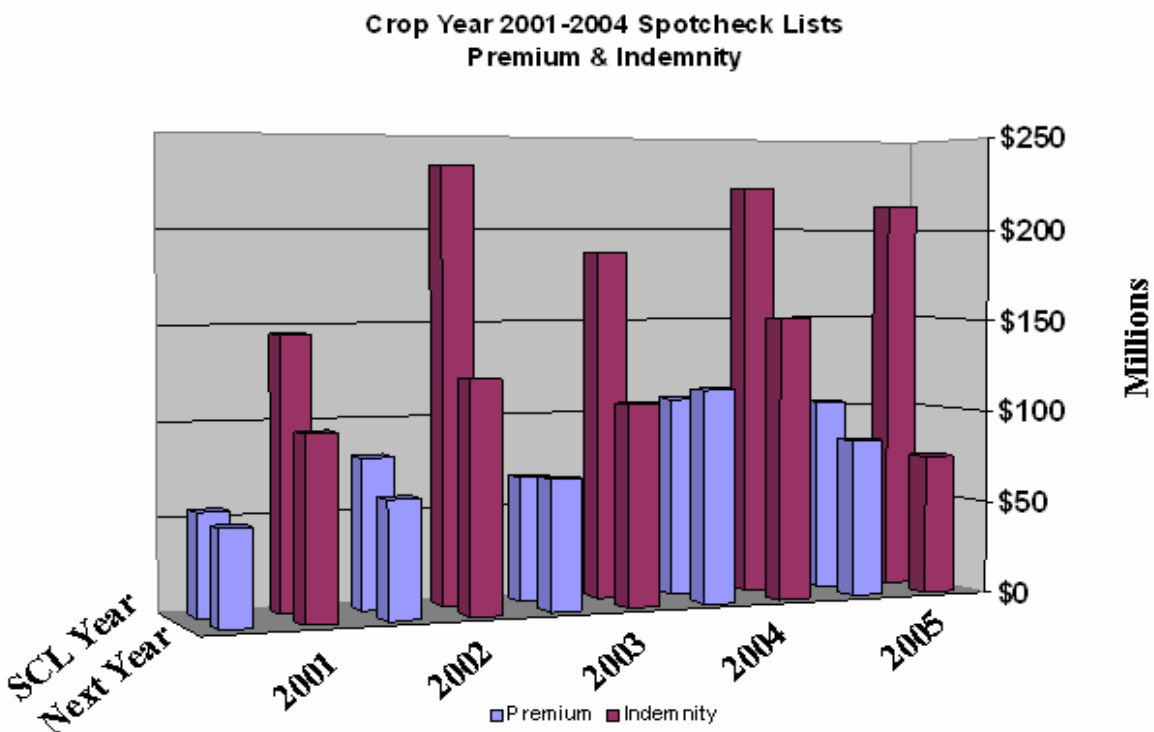
² *Conference Report to Accompany H.R. 2744, Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2006*, 109th Congress, 1st sess., Report 109-225, 83.

Appendix I



Rebounders: Those Who Were on The Spotcheck List, Changed Their Behavior for One Year, and Then Returned to Prior Loss Pattern.
Indemnities decreased by \$46 Million in 2004, but increased \$32 Million in 2005.

Appendix II



Indemnity Decreases for 2001-2005: \$450 Million.

Taller bars reflect payments before producers were on the Spotcheck List, and the taller bars are after they were on the Spotcheck List.